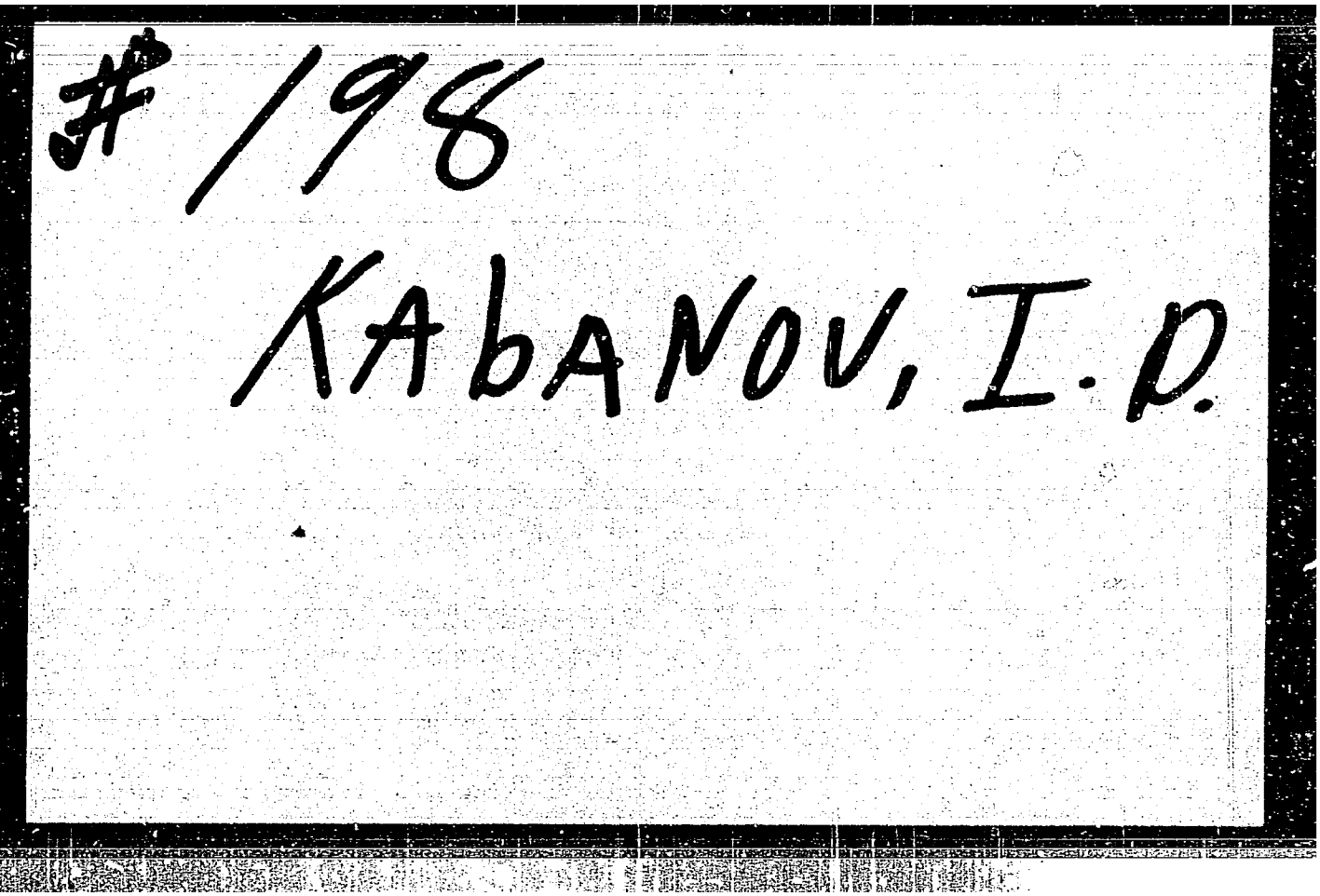

KABANOV, I.D., inzhener; KOFNER, A.Ya., inzhener; PUCHKOVSKIY, V.V., kandidat tekhnicheskikh nauk.

Drying power transformers applying extraneous alternating current. Elek. sta. 28 no.6:80-81 Je '57. (MLRA 10:8)
(Electric transformers)

KABANOV, I.D., inzh.

Experimental adjustment of commutation. Vest. elektroprom. 32 no.1:66-67 Ja '61. (MIRA 14:3)
(Commutation (Electricity))

KABANOV, I.D., inzh.; BERDYUGIN, I.A., inzh.

Permissible power discrepancies of the cylinders of diesel-generators in parallel operation. Elek.sta. 32 no.6:47-49 Je '61. (MIRA 14:8)

(Diesel electric power plants)

PYASTOLOV, A.A.; KABANOV, I.D.; SERDYUK, V.I.; CHERNOPYATOV, N.I.; KURGANOVA, M.A., red.; BALLOD, A.I., tekhn. red.

[Guide to the repair of electrical equipment] Praktikum po remontu elektrooborudovaniia. Moskva, Izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1962. 167 p. (MIRA 15:5)
(Electric machinery--Maintenance and repair)

KABANOV, I. G.

"The Electrical Industry and Its Role in the Development of the National Economy of the USSR" (Elektropromyshlennost' i yeye rol' v razvitii narodnogo khozyaystva SSSR), "Pravda," 1949, 30 pp.

KABANOV, I.S.

Repairing delivery rollers of logging frames. Rats. i izobr. predl. v strel. no.116 :7-8 '55. (MLRA 9:7)
(Sawmills)

[redacted], N. A.

Ammonioidea

Several structural peculiarities of laciniate lines in ammonites. Biul. MOIP. Otd. geol. 27 No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

1. KABANOV, K. A.

2. USSR (600)

4. Volga Valley - Ammonoidea

7. Ammonities of the Volga. Priroda 41 no. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

KABANOV, K.A.

USSR/ Minerals - Spontaneous combustion

Card 1/1 Pub. 86 - 16/36

Authors : Kabanov, K. A.

Title : Spontaneous combustion of bituminous clay

Periodical : Priroda 44/6, 96-98, Jun 1955

Abstract : A study is made of the phenomenon of spontaneous combustion of bituminous clays. The study includes an examination of the arrangement of the layers of different materials in the soil, the determination of the part that actually burns, the effect upon the rocks, the cause of ignition (probably due to the presence of sulfur pyrite), the conditions under which combustion does not take place, and the possibility of utilizing the heat produced. One Soviet reference (1953).

Institution : .....

Submitted : .....

KABANOV, Konstantin Andreyevich; VALKIN, M.Kh., red.; KHAKHAM, Ya.M., tekhn.red.

[Mineral resources of Ul'yanovsk Province] Poleznye iskopaemye Ul'ianovskoi oblasti. Ul'ianovskoe knizhnoe izd-vo, 1958. 34 p. (MIRA 12:6)
(Ul'yanovsk Province--Mines and mineral resources)

KARANOV, K.A.

Did the living belemnite have a hard rostrum? Paleont. zhur. no.2: 30-40 '59. (MIRA 13:1)
(Belemnites)

KABANOV, K.A.

Occurrences of Jurassic and Cretaceous reptiles in the Ul'yanovsk region. Izv. Kazan. fil. AN SSSR. Ser. geol. nauk no. 7:211-214 '59. (MIRA 14:4)
(Ul'yanovsk region—Reptiles, Fossil)

3(5)

AUTHOR: Kabanov, K. A. SOV/20-124-4-46/67

TITLE: Symptoms of the Desalinification of the Hauterivian Sea in the Volga Area of Ul'yanovsk (Priznaki opresneniya Goterivskogo morya v Ul'yanovskom Povolzh'ye)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 4, pp 893-895 (USSR)

ABSTRACT: Prior to the construction of the Kuybyshev reservoir, the Lower-Cretaceous sediments of the Hauterivian stage were exposed over a distance of about 18 km on the Volga banks north of Ul'yanovsk. The Hauterivian stage was subdivided (Refs 1,2) into 2 "Simbirskite" (simbirskitovyye) zones: a) an upper one, and b) a lower one. In the sediments of the lower zone, remains of a fauna inhabiting a sea of normal salt content can be found. Brackish water deposits were not encountered. Nor were there any signs of a deviation from the normal development of invertebrates caused by salt content changes. During the sedimentation of the upper zone the environment began to change: the previously extensive sea waters were restricted, the western coast line shifted to the east. This latter factor, together with an ample inflow of continental waters, effected a desalinification of the nearshore sea zone of

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Symptoms of the Desalinification of the Hauterivian Sea in the Volga Area of Ul'yanovsk

the Hauterivian sea of the area mentioned in the title. This process took place soon after the beginning of the late-"Simbirskite" age. Maritime organisms no longer could exist there, a conclusion which may be drawn from the lack of appropriate fossiles. There are still numerous ammonite species of the genus "Simbirskite" at the basis of the Upper-"Simbirskite" loams, and Craspedodiscus (separated out from "Simbirskite"), belemnites, numerous pelecypodes, gastropodes, dentalium etc. are also encountered. Eventually the number of admixtures of brackish water species increases: occurrence of Corbula, rare modiola and tellina (Pelecypodes), Eulima (Gastropodes) in large numbers. At the same time, symptoms of a "suppression" of the fauna emerge: shells of the lower zone species become smaller (Gastropodes: Buccinum, Pelecypodes: Lucina) than before. The once numerous ammonites seem to have entirely disappeared due to desalinification. For these reasons, the author suggests the sedimentation of the uppermost levels of the Hauterivian as a special Upper-"Simbirskite" (nadsimbirskitovaya) zone. The number of species rapidly decreases. The above observations confirm the views held by L. A. Zenkevich (Ref 6) concerning the recent seas: to the brackish water species, Darwin's theorem can

Symptoms of the Desalinification of the Hauterivian Sea in the Volga Area of Ul'yanovsk

be applied, according to which biotopes which significantly differ from the original type are inhabited by a small number of species but a large number of individuals. An analogous decrease in size manifests itself in molluscs on the invasion of the Baltic Sea from the North Sea. From the data on the area mentioned in the title an interruption of the sedimentation towards the end of the Hauterivian and prior to the beginning of the Barremian stage can be assumed (confirmed in 1954-55, by D. A. Vital'). The above facts must be taken into consideration for the purpose of a correct stratigraphic subdivision and of an exact definition of the paleographic sea coast lines. There are 6 Soviet references.

PRESENTED: October 11, 1958, by N. M. Strakhov, Academician

SUBMITTED: October 9, 1958

SIGAL, M.Z., dotsent; KABANOV, K.V., inzhener

Dilator lever for the arci costarum. Vest.khir. no.8:106-108 '61. (MIRA 15:3)

1. Iz kafedry khirurgii i onkologii (zav. - prof. Yu.A. Ratner) Kazanskogo instituta usovershenstvovaniya vrachey im. V.I. Lenina.
(SURGICAL INSTRUMENTS AND APPARATUS)

KARANOV, L.A. (Ul'yanovsk)

Spontaneous ignition of bituminous clays. Priroda 44 no.6:96-98 Je '55. (MLRA 8:7)
(Combustion, Spontaneous)

KABANOV, L.I., Cand Tech Sci—(diss) "Analysis of the process of ~~scutching~~ lestiva in bast fiber ~~preparation~~ primulation." Tashkent, 1957. 15 pp (Min of Higher Education USSR. Tashkent Textile Inst), 150 copies (KL,44-58,122)

KABANOV, L.I.

Analysis of the scutching process in preparing bast fibers. Sbor. nauch.-issl. rab. TTI no.4:75-84 '57. (MIRA 11:9)
(Textile machinery) (Bast)

KABANOV, I.I.

Analysis of the performance of the interception mechanism of the TMM-200K scutcher and ways of its redesigning. Izv. vys.ucheb.zav.; tekh.tekst.prom. no.6:40-44 '61. (MIRA 15:1)

1. Tashkentskiy tekstil'nyy institut.
(Textile machinery)

KABANOV, L.I., starshiy prepodavatel'

Artificial retting of hemp stalks and bast with electrode heating of the retting liquor. Tekst.prom.22 no.3:40-42 Mr '62. (MIRA 15:3)

1. Tashkentskiy tekstil'nyy institut.
(Retting)(Hemp)

SOV/136-59-4-3/24

AUTHORS: Drobchenko, A.T., Bulatov, V.D., Babadzhan, A.A., and Kabanov, L.M.

TITLE: Treating the Dzhezkazgan Copper-Lead Ores by Differential Flotation Followed by a Pyro-Selective Converter Treatment (Pererabotka medno-svintsovoy rudy Dzhezkazganskogo mestorozhdeniya po skheme kollektivnoy flotatsii s posleduyushchey piroselektsiyey v konvertere)

PERIODICAL: Tsvetnyye metally, 1959, Nr 4, pp 10-15 (USSR)

ABSTRACT: There is a considerable quantity of ore used on the Kirovgradsky copper smelter which is obtained from Dzhezkazgan and contains 4-5% Cu and 0.8-1.5 Pb. Selective flotation was at first used in the scheme (Fig 1) for extracting the metals but this was found to be unsatisfactory as the ratio of the metals was unsuitable, the metal content varied within wide limits and the quantity of reagents used was very costly. The cost-price of lead produced by this method was high and the yield very variable (table 1). Work carried out at the Unipromed Institute on copper-zinc production by pyroselective means had shown that lead was recovered at a greater rate even

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Treating the Dzhezkazgan Copper-Lead Ores by Differential Flotation Followed by a Pyro-Selective Converter Treatment

than zinc. An experiment was therefore carried out and was successful leading to the production scheme in Fig 2; differential flotation of sulphides followed by pyroselective treatment. The concentrate from the flotation contained 30 to 33% Cu and 9.25 to 10.72% Pb. This was passed to the converter where coke was used as a reducing agent. The results of this method are given in table 4 and the relative cost compared with selective flotation in table 6. This shows its advantages over selective flotation which are: higher amount of lead extracted; copper content in dust from pyroselection much less; extraction of zinc and rare metals as well as lead; copper extraction higher by 3 to 4%; no poisonous cyanide materials used and running costs significantly lower. There are 2 figures, 6 tables and 4 Soviet references.

KABANOV, L.P.

AID Nr. 980-2 31 May

ATOMIC POWER PLANTS WITH SUPERHEATING IN A SEPARATE REACTOR (USSR)

Sterman, L. S., S. M. Driven, and L. P. Kabanov. Teploenergetika, no. 5, May 1963, 35-38. S/096/63/000/005/003/011

An analysis is presented of several flow diagrams of atomic power plants with superheating in a separate reactor. This type of plant has been under development at the Moscow Power Engineering Institute since 1957. The following systems are considered: 1) a system with primary superheating in separate reactors, 2) a system with primary superheating in a separate

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ATOMIC POWER PLANTS [Cont'd] S/096/63/000/005/003/011

reactor and intermediate superheating in a heat exchanger, 3) a system with primary reactor-superheater only, 4) a system with primary superheating in a separate reactor and intermediate superheating of vapor from a low-pressure turbine in a heat exchanger, and 5) a system with standard turbines operating at supercritical parameters. The following conclusions are drawn: 1) In power plants with turbines operating at inlet pressures of 130 atm and temperatures of 565°C, it is advantageous to generate steam and superheat in separate reactors. 2) The power plant with secondary superheating in a heat exchanger is very economical. 3) For a plant with turbine inlet parameters of 130 atm and 565°C, a system with a reactor-evaporator and a reactor-superheater but without intermediate superheating can also be used. 4) A power plant with supercritical parameters (240 atm, primary superheating to 580°C, and intermediate superheating to 560°C) can be designed using lot-produced turbogenerators.

[AS]

L 22101-65 S/096/65/000/001/0069/0072
ACCESSION NR: AP5002204 EWT(m)/EPF(n)-2/EWA(m)/T/EWP(t)/EPA(bb)-2/EWP(b)
Pa-4 AEDC/SSD/AFWL MJW/JD

AUTHORS: Bertolomey, O. G. (Candidate of technical sciences); Kabanov, L. P. (Engineer)

TITLE: Investigation of heating the AES steam generator with saturated steam

SOURCE: Teploenergetika, no. 1, 1965, 69-72

TOPIC TAGS: heat exchanger, steam generator, boiler/ No 3 TETs MEI boiler, 1Kh18N9T steel, 20 steel

ABSTRACT: An experiment was carried out to study the heating range in an AES steam generator (atomic electric power plant) by saturated vapor. A model installation was used to simulate the double-circuit water-type AES power plant. A large cylindrical drum (1210 mm inside diam) was used with heat-exchanger coils (80 m^2 surface area) made of rust-proof steel. The drum was filled with water (40-80C initial temperature). Saturated water vapor was fed into the heat-exchanger coils from a nearby boiler under 40-atm pressure at controlled rates. The maximum steam flow rate was 400 $kg/m^3 \cdot hr$ and the volume of water in the steam generator, 2.5 m^3. Throughout the experiment it was noticed that, during the steam heating

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L 22161-65
ACCESSION NR: AP5002206

process, vibration and noise were generated for the first 30 minutes, accompanied with water hammer, in direct proportion to the steam flow rate. After 200-280 kg/m^3 hr flow rate had been attained, the noise level remained the same, with no water hammer. Flow rate, pressure, and temperature versus heating time curves showed three distinct regions: 1) pressure remains constant while the flow rate G changes from 80-400 $kg/m^3 \cdot hr$ and Δt (Δt = t (boiler) - t (drum)) drops from 50C to 10C; 2) pressure rises from atmospheric to 6-8 atm, G remains constant and $\Delta t \approx$ 2-6C; 3) the rate of change of pressure reaches a maximum, from 0.33 to 0.56 atm/min. Varying the steam flow rate is shown to change the heating rate of the evaporator (drum). Orig. art. has: 4 figures.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Institute of Heat Power Engineering)

SUBMITTED: 00 ENCL: 00 SUB CODE: TD

NO REF SOV: 000 OTHER: 000

Card 2/2

BARTOLOMEY, G.G., kand. tekhn. nauk; KABANOV, L.P., inzh.

Development of nuclear power engineering in Great Britain. Teplo-energetika 11 no.6:89-92 Je '64. (MIRA 18:7)

KABANOV, L.T., dotsent, kand. tekhn. nauk

Calculating the heat supply needs in the shops for thermal retting. Tekst. prom. 23 no.7:20-23 Jl '63. (MIRA 16:8)

1. Kafedra pervichnoy obrabotki lubyanykh volokon Tashkentskogo tekstil'nogo instituta.
(Retting—Equipment and supplies)

BELIKH, S.P., polkovnik meditsinskoy sluzhby; NAZAROV, Yu.G., mayor meditsinskoy sluzhby; KABANOV, L.Ya., podpolkovnik meditsinskoy sluzhby

Results of dispensary observations on a group of patients with coronary insufficiency. Voen.-med.zhur. no.10:24-27 O '59. (MIRA 13:3)

(CORONARY DISEASE, diagnosis)

TITARENKO, N.; KABANOV, M.

Reinforced concrete elements for mining and ore dressing combines of the Krivoy Rog Basin. Prom.stroi. i inzh. soor. 4 no.4:4-10 Jl-Ag '62. (MIRA 15:9)

1. Glavnyy inzh. tresta "Krivorozhstroydetal'" (for Titarenko).
2. Glavnyy tekhnolog tresta "Krivorozhstroydetal'" (for Kabanov).
(Krivoy Rog Basin--Precast concrete)

[redacted], B. F.; [redacted], M.

Bearings (Machinery)

Examination of the inhibitor NT-4 in protecting bearings. Podshipnik, No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, April 1952. UNCLASSIFIED.

1. KABANOV, M. F. Eng. : CHERNYSHEVA, T. M. Eng.

2. USSR (600)

4. Grinding and Polishing

7. Substitutes for Diesel fuel in grinding ball bearings. Podshipnik no. 9, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

1. M. F. KABANOV, T. M. CHERNYSHEVA

2. USSR (600)

4. Bearings (Machinery)

7. New technology for preserving bearings and their parts. Podshipnik no. 12. 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

1. KARANOV, M. P. Eng.

2. USSR (600)

4. Corrosion and Anticorrosives

7. Causes of the formation of corrosion on rollers and measures against it, Pod-shipnik No 1, 1953.

9. **Monthly List of Russian Accessions, Library of Congress,** June **1953. Unclassified.**

SOV/123-59-16-64704

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 16, p 146 (USSR)

AUTHORS: Karasik, P.I., Kabanov, M.F.

TITLE: The Development of Methods of Protecting Metallic Precision Articles of the Bearing Manufacturing Industry From Corrosion

PERIODICAL: Tekhnol. podshipnikostroyeniya, 1958, Nr 17, 146 - 150

ABSTRACT: Methods of protecting manufactured articles from corrosion, when they are stored and conserved in between operations are described. These methods were originally employed at the 1st State Bearing Manufacturing Plant (GPZ). Measures which were carried out to improve protection are stated. At present the following conservation method is employed: Washing in a solution of emulsion salt (100 - 200 grams/liter) at a temperature of 70 - 85°C, exposure to air, washing in mineral oil at a temperature of 90 - 95°C, washing in vaseline or "pushsmazka" (most probably "flaky grease") at a temperature of 110 - 120°C, immersion into molten protection grease; conservation for tropical climates is effected in the following way: wrapping of the machine parts to be con-

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SOV/123-59-16-64704

The Development of Methods of Protecting Metallic Precision Articles of the Bearing Manufacturing Industry From Corrosion

served into paraffin paper and subsequent twofold immersion into a molten mixture of paraffin and ceresin; the brief protection for storing in between operations consists in washing in a solution of emulsion salt (100 - 200 gr/liter), exposure to air. A longer protection is obtained in a solution of triethanolamine or, in a closed room, with silica gel.

S.V.M.

Card 2/2

BAYKOV, S.P., kand. tekhn. nauk; BELENKO, I.S., kand. tekhn. nauk; BELKOV, S.F., inzh.; BELYANCHIKOV, M.P., inzh.; BERNSHTEYN, I.L., inzh.; BOGORODITSKIY, D.D., inzh.; BOLONOVA, Ye.V., kand. tekhn. nauk; BROZGOL', I.M., kand. tekhn.nauk; VLADIMIROV, V.B., inzh.; VOLKOV, P.D., kand. tekhn. nauk; GERASIMOVA, N.N., inzh.; ZHUKHOVITSKIY, A.F., inzh.; KABANOV, M.F., inzh.; KANEVTSOV, V.M., kand. tekhn. nauk; KOLOTENKOV, I.V., inzh.; KONDRAT'YEV, I.M., inzh.; KUZNETSOV, I.P., kand. tekhn. nauk; L'VOV, D.S., kand. tekhn. nauk; LYSENKO, I.Ya., kand. tekhn. nauk; MAKAROV, L.M., inzh.; OLEYNIK, N.D., inzh.; RABINER, Ye.G., inzh.; ROZHDESTVENSKIY, Yu.L., kand. tekhn. nauk; SAKHON'KO, I.N., kand. tekhn. nauk; SIDOROV, P.N., inzh.; SPITSYN, N.A., prof., doktor tekhn. nauk; SPRISHEVSKIY, A.I., kand. tekhn. nauk; CHIRIKOV, V.T., kand. tekhn.nauk; SHEYN, A.S., kand. tekhn. nauk; NIBERG, N.Ya., nauchnyy red.; BLAGOSKLONOVA, N.Yu., inzh., red. izd-va; SOKOLOVA, T.F., tekhn. red.

[Antifriction bearings; manual] Podshipniki kacheniia; spravochnoe posobie. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 828 p. (MIRA 15:2)
(Bearings (Machinery))

KABANOV, M.F.

S/137/63/000/003/012/016
A006/A101

AUTHORS: Sheyn, A. S., Tsareva, A. A., Kabanov, M. F., Sinitsyna, T. V.

TITLE: Stainless steels for bearings intended for operation at high temperatures

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3,1963, 67, abstract 31360 ("Tr. Vses. n.-i. konstrukt-tekhnol. in-ta podshipnik. prom-sti", 1960, no. 4, (24) 3 - 14)

TEXT: The authors studied the effect of tempering temperature ranging from 120 to 550°C and cold treatment upon hardness; hot tests were made for a_k, hardness, and scale resistance during extended time at up to 500°C; the authors determined moreover changes in the dimensions at elevated temperatures and corrosion resistance in 5%-HNO_3 and NaCl solutions at alternating immersion of steel grades X18 (Kh18), X18B2Φ (Kh18V2F), X18B4Φ (Kh18V4F), X18Φ1 (Kh18F1), X18M2Φ (Kh18M2F), X18MKΦ (Kh18MKF) (1.1% Co) and EI928 (EI928) (0.89% C, 13.6% Cr, 1.23% Be, 5.85% Ni, 4.65% Co). It was established that tempering at 400°C after cold treatment yields the same hardness as tempering at 480 - 500°C

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to maximum secondary hardness; corrosion resistance in 5%-HNO_3, after tempering at 400°C, is the same as after tempering at 150°C and exceeds considerably the strength of steels tempered at 500°C. Maximum hardness for all steels, except Kh18V4F, is attained after quenching from 1,125 - 1,150°C. Increased duration of holding at 400°C promotes increase in hardness of steel. Highest hardness at temperatures up to 400°C is shown by EI928 steel, tempered at 475°C. The other steel grades, except Kh18 steel with 0.8% C, have practically the same hardness at 400°C (R_c about 55) in spite of the different degree of alloying. a_k of the investigated steels in a 20 to 400°C range does practically not change. Scale-resistance at up to 400°C is equal for all steels. Corrosion resistance of Kh18F1, Kh17MKF, Kh18M2F steels in 5% HNO_3 solution is the same as in standard Kh18 steel (a group of very resistant steels). Steel Kh18V4F has a resistance which is ten times less, and EI928 steel - hundred times less. Corrosion resistance of the steel in 3% NaCl solution is equal. EI928 and Kh18V4F steels are not recommended for the manufacture of stainless heat resistant bearings, intended for operation in HNO_3 and its vapors; it is expedient to use Kh18 steel. Heat treatment of bearing parts should consist of preheating at 850°C, final heating to 1,150°C in a salt bath for 20 sec per 1 mm section or to 1,070 -

Stainless steels for bearings intended for...

SI/137/63/000/003/012/016
A006/A101

1,100°C in an electric furnace for 1.0 - 1.5 min per 1 mm section; quenching; cold treatment at -70°C for 1 hour; tempering at 400°C for 5 hours. To manufacture bearing parts operating at -200 to +100°C, Kh18 steel is recommended with a higher content of C (1.25%). After cold treatment and tempering at 120°C, R_C of this steel is 63 - 64.

N. Kalinkina

[Abstracter's note: Complete translation]

Card 3/3

S/276/63/000/003/002/006
A004/A127

AUTHORS: Sheyn, A. S., Tsareva, A. A., Kabanov, M. F., Sinitsyna, T. V.

TITLE: Stainless steels for bearings intended for operation at elevated temperatures

PERIODICAL: Referativnyy zhurnal, Tekhnologiya mashinostroyeniya, no. 3, 1963, 58, abstract 3B248 ("Tr. Vses. n.-i. konstrukt.-tekhnol. in-ta podshipnik, prom-sti", 1960, no. 4, (24), 3 - 14)

TEXT: Hardness tests were carried out after tempering at temperatures in the range of from 120 to 550°C. Heat tests were performed in the temperature range of 20 - 500°C, testing the notch toughness, hardness and scale resistance at long-time holding. Dimensional changes were tested at maximum operating temperatures, while the corrosion resistance was tested in aggressive media (5% HNO_3 solution, alternative dipping; 5% NaCl solution, alternative dipping). As a result of testing eight alloys it was found that, for the manufacture of bearings operating at temperatures of up to 400°C, it is expedient of using the 18 (Kh18) steel.

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S/276/63/000/003/002/006
A004/A127

Stainless steels for bearings .....

The following heat treatment is recommended: Preheating up to 850°C final heating (in a salt bath) up to 1,150°C, 20 sec holding per 1 mm of cross section; heating in an electric furnace with air atmosphere up to 1,070 - 1,100°C, 1 - 1.5 minutes holding per 1 mm of cross section, cold treatment (slow cooling of the components down to -70 - 80°C, holding at -70°C for 30 - 60 minutes, heating up to the shop temperature in the air), one single tempering at 400°C for 5 hours. For the manufacture of bearing parts operating at temperatures from -200 to +100°C, a steel is recommended which, in comparison with the Kh18 grade steel, has a higher C-content. After cold treatment and tempering at 120°C, a hardness of HRC 63 - 64 could be obtained. For manufacturing heat-resistant bearings, operating in an oxidizing atmosphere and in media containing NaCl, EI926 (EI928) steel can be used. There are 15 figures.

T. Kislyakova

[Abstracter's note: Complete translation]

Card 2/2

KARAKOV, M.M., inzhener.

Using data on the water balance of a river channel for water distribution. Gidr. i mel. 5 no.6:11-18 Je '53. (MLRA 6:7)
(Stream measurements)

KABANOV, M.M.

KABANOV, M.M.

Using ACTH in certain psychic diseases [with summary in French]. Zhur.nevr. i psikh. 57 no.8:1009-1014 '57. (MIRA 10:11)

1. Kafedra psikhiatrii I Leningradskogo meditsinskogo instituta imeni I.P.Pavlova.

(MENTAL DISORDERS, therapy,
ACTH (Rus))
(ACTH, therapeutic use,
ment. disord. (Rus))

KABANOV, M.M.

Evaluation of adrenal cortex function and the effectiveness of the use of adrenocorticotropic hormone (ACTH) for mental patients with a depressive condition. Vop. psikh. i nevr. no.5:202-213 '59.
(MIRA 14:5)

1. Kafedra psikhiatrii (ispolnyayushchiy obyazannosti - I.Ye. Kashkarov) 1-go Leningradskogo meditsinskogo instituta imeni akademika I.P.Pavlova (direktor - A.I.Ivanov) i 2-ya Psikhonevrologicheskaya bol'nitsa (glavnyy vrach - T.I.Nikolayeva).
(ADRENAL CORTEX) (ACTH)
(MENTAL ILLNESS)

KABANOV, M.M.

Problem of stress. Vrach.delo no.5:501-502 My '59. (MIRA 12:12)

1. Kafedra psikhiatrii Pervogo Leningradskogo meditsinskogo instituta.

(STRESS (PHYSIOLOGY))

KARANOV, V. V.

Dissertation defended at the Institute of Physiology imeni I. P. Pavlov for the academic degree of Candidate of Medical Sciences:

"Function of the Suprarenal Cortex and the Medicinal Use of Adrenocorticotropic Hormone for Depressive States of Various Origins."

Vestnik Akad Nauk, No. 4, 1963, pp. 119-145

KABANOV, N.M.

Higher aquatic plants and their relation to the contamination of continental bodies of water. Trudy Gidrobiol. ob-va 12:410-416 '62. (MIRA 15:12)

1. Institut obshchey i kommunal'noy gigiyeny imeni A.N. Sysina AMN SSSR, Moskva.
(Freshwater flora) (Water—Pollution)

ARKHIPOVA, L.I.; BARABANSHCHIKOV, V.V.; BAKHVALOVA, Z.M.; BOROVINSKAYA, M.A. GOLOVCHINER, I.Ye.; DZHAMGAROVA, P.G.; YEVDOKIMOV, S.V.; KABANOV, M.M.; KNYAZEVA, T.D.; KOBOZEVA, N.V.; KOLEGOV, N.I.; LOPOTKO, I.A.; NEGUREY, A.P.; POLYAKOVA, Z.P.; ROMM, S.Z.; SVETLICHNYY, V.A.; STRAKUN, I.M. TYAGUN, V.N.; FREYDLIN, S.Ya., prof.

[Dispensary service for the urban population] Dispanserizatsiia gorodskogo naseleniia. Leningrad, Meditsina. 1964. 349 p. (MIRA 17:8)

KABANOV, M.M.; SLUCHEVSKIY, F.I.; DEDOV, V.F. (Leningrad)

Daytime hospitals as institutions of "parttime hospitalization" in the system of psychiatric aid. Zhur. nevr. i psikh. 65 no.8: 1266-1271 '65. (MIRA 18:8)

S/913/62/003/000/015/033
D405/D301

AUTHOR: Kabanov, M.N.

TITLE: On the role of diffuse scattering in atmospheric-transparency measurements

SOURCE: Akademiya nauk Kazakhskoy SSR.Astrofizicheskiy institut. Trudy. v. 3. 1962. Rasseyaniye i polyarizatsiya sveta v zemnoy atmosfere; materialy Soveshchaniya po rasseyaniyu i polyarizatsii sveta v atmosfere. 97 - 102

TEXT: The results are given of spectral measurements of atmospheric transparency in the visible and near-infrared regions. The experimental data were obtained under different atmospheric-optical conditions and angular parameters of the sources and of the receiver. The experimental apparatus and procedure are described. A photoelectric photometer served as a receiver. Various combinations of glass and interference light-filters were fixed in front of the aperture diaphragm. 73 measurements were processed; out of these,

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55 were conducted from distant sources, the visibility ranging from 8 to 100 km; 13 measurements were conducted in fog, and 5 measurements from a source 100 m away. The determination of the influence of diffuse scattering on transparency measurements amounts to obtaining the ratio $S_д/S_n$, where $S_д$ denotes the fraction of the signal contributed by the scattered radiation and S_n the fraction of the signal contributed by direct damping of the radiation. The transparency in the measurements was reduced due to pollution of the atmosphere by dust or industrial waste products. It was found that in the case of high atmospheric transparency (i.e. visibility 20 km and above), and medium transparency (due to dustiness), the diffuse scattering has very little effect, at least up to distances of 9-10 km in the first case and 3-4 km in the second, provided that the angular parameters of receiver and source do not exceed 0.01 and 0.7 radian respectively. In view of the fact that the influence of higher-order scattering is much smaller than that of single scattering, it can be assumed that in practice it is entirely sufficient to take into account only the latter in the case of high atmospheric transparency

On the role of diffuse scattering ...

($T_\lambda > 0.40$). For a dusty atmosphere this applies to lower transparencies ($T_\lambda > 0.30$). The discrepancy between the theoretical and experimental spectral curves S_∂ / S_n can be ascribed to the influence of the higher-order scattering. Thus, in fog it is not sufficient to take into account single scattering only, at least for $T_\lambda < 0.10$. There are 3 figures and 2 tables.

KABANOV, M.V.

Reclamation of transformer oils with the use of a portable filter.
Prom.energ. 17 no.1:10-11 Ja '62. (MIRA 14:12)
(Insulating oils)
(Oil reclamation)

ZUYEV, V.Ye.; KHMELEVTSOV, S.S.; KARANOV, M.V.

Studying intermolecular reactions in the system quinone - phenol by the use of infrared vibration spectra. Izv. vys. ucheb. zav.; fiz. no.4:171-172 '59. (MIRA 13:3)

1.Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V.V. Kuybysheva.
(Benzoquinone) (Phenol)

29874
S/169/61/000/009/027/055
D228/D304

3.5150 (1114)

AUTHOR: Kabanov, M. V.

TITLE: Influence of scattered radiation on the measurement of the atmospheric transparency

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 9, 1961, 22, abstract 9B190 (Dokl. Mezhvuz. nauchn. konferentsii po spektroskopii i spektr. analizu, Tomsk, Tomskiy un-t, 1960, 93-95)

TEXT: Calculations were made for the scattered radiation of the atmosphere in relation to the angular aperture of the receiver (ψ), the angular dimension of the pencil of light of the source (Θ), and the character of the atmospheric turbidity. The following formula was derived:

$$T_{\psi\Theta} = T\left[1 + pf\,(\psi,\Theta)\,\ln\frac{1}{T}\right]$$

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S/139/62/000/004/003/018
E032/E314

9.9300

AUTHOR: Kabanov, M.V.

TITLE: The effect of singly scattered radiation on measurements of the transmissivity of the atmosphere

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no. 4, 1962, 28 - 32

TEXT: An attempt is reported to obtain a theoretical description of the effect of diffusely scattered radiation on atmospheric-transmissivity measurements for any degree of turbidity. It is assumed that only singly scattered radiation need be taken into account and that the atmosphere is homogeneous. Thus, in addition to the "direct" radiation given by $E_1 = (J_o/r^2)\exp(-kr)$, where k is the scattering coefficient and r the thickness of the scattering layer, the receiver will also intercept radiations scattered from volume elements lying outside the path of the "direct" radiation and this is approximately given by:

The effect of ....

$$E_2 = \frac{kJ_o e^{-kr}}{2r} \int_0^{\Psi} \int_0^{\Theta} \beta(\psi + \vartheta) \cos\psi \, d\psi \, d\vartheta \qquad (4)$$

where Ψ is the angular aperture of the detector, Θ is the angular aperture of the source, β is the scattering function and ψ and ϑ are the polar angular coordinates of a scattering volume. Hence, the total radiation received can be written in the form $E_{Tot} = E_1 + E_2 = (J_o/r^2)(1+krC)\exp(-kr)$, where C is the integral in the expression for E_2. It is clear from this expression that under given experimental conditions, k and C may be determined from relative measurements and E_{Tot} for three distances between the source and the detector. It is shown that the expression for E_{Tot} is consistent with existing empirical formulae and a brief

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ACCESSION NR: AP4025099 S/0139/63/000/006/0162/0167

AUTHORS: Zuyev, V. Ye.; Kabanov, M. V.; Borovoy, A. G.

TITLE: Decay of light signals in scattering media. 1. Calculation results of single scattering in the direction of radiation

SOURCE: IVUZ. Fizika, no. 6, 1963, 162-167

TOPIC TAGS: single scattering, radiation source, mean free path, characteristic-curve, water-particle transmittivity

ABSTRACT: To determine the single scattering magnitude of D, a function of the cone angle of radiation source Θ, given by

$$D = \frac{1}{2}\int_0^{\Theta}\int_0^{\Psi}\beta(\rho, \psi + \theta)\, d\psi d\theta,$$

where Ψ - aperture of collector, $\rho = 2\pi a/\lambda$, a - particle radius, and λ - mean free path, has been determined for various values of Ψ and Θ. The characteristic-

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ACCESSION NR: AP4025099

curve expression for spherical water-particle transmittivity, and for values of $\rho = \rho \to 0$, $1 \leq \rho \leq 30$, and $\rho \geq 30$ have been used. The results of calculations were compared with existing experimental values and were found to be satisfactory. Orig. art. has: 12 equations, 3 figures, and 1 table.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V. V. Kuyby*sheva (Siberian Physicotechnical Institute, Tomsk State University)

SUBMITTED: 30May62 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 004 OTHER: 005

Card 2/2

ZUYEV, V. Ye.; KABANOV, M. V.; KOSHELEV, B. P.; TVOROGOV, S. D. KHMELEVTSOV, S. S.

"The influence of microstructure parameters of clouds and fogs on their spectral transmission in Region 0.5-14 Microns."

report presented at the Atmospheric Radiation Symp, Leningrad, 5-12 Aug 64.

ACCESSION NR: AP4020311 S/0139/64/000/001/0168/0172

AUTHORS: Zuyev, V. Ye.; Kabanov, M. V.

TITLE: Attenuation of a light signal in a scattering medium. 2. Experimental investigations in cloud chambers

SOURCE: IVUZ. Fizika, no. 1, 1964, 168-172

TOPIC TAGS: light, light signal, attenuated light signal, light scattering, cloud chamber, scattering ratio, side scattering, optical thickness, single scattering, monodisperse system, polydisperse system

ABSTRACT: This paper contains results of experimental testing on the limits of applicability of a formula derived previously by the same two authors and A. Borovoy (Izv. vuzov SSSR, Fizika, no. 6, 1963) on attenuation of a signal from a point source. By means of a special photometer and a continuous trap, optical and microphysical determinations were made, and these show a proportional dependence of the scattering ratio of side to direct radiation on the optical thickness. Values of attenuation were computed for different values of angular aperture and other parameters. Experiments on scattering by small particles (tobacco smoke)

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ACCESSION NR: AP4020311

have shown that side scattering is much less for these particles than for large particles (in the cloud). The ratio of side to direct scattering is proportional to optical density up to a thickness of 2.5. A comparison of experimental data with computations shows good quantitative agreement. This furnishes grounds for stating that (1) the comparison of attenuation obtained for a monodisperse system of scattering particles with that for a polydisperse system according to mean-square diameter (with bell-shaped particle-size distribution, as in these experiments) is justified, and (2) the computation of side-scattered radiation may be made according to data of the theory of single scattering, at least to an optical thickness of 1.5 for large particles (about 8 microns) and to an optical thickness up to 2.5 for small particles (about 0.2 micron). Orig. art. has: 4 figures and 2 formulas.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V. V. Kuybyshseva (Siberian Physicotechnical Institute at Tomsk State University)

SUBMITTED: 30May63 DATE ACQ: 31Mar64 ENCL: 00

SUB CODE: PH NO REF SOV: 003 OTHER: 000

Card 2/2

ACCESSION NR: AP4036563 S/0139/64/000/002/0090/0097

AUTHORS: Zuyev, V. Ye.; Kabanov, M. V.; Koshelev, B. P.; Tvorogov, S. D.; Khmelevtsov, S. S.

TITLE: Spectral transparency and microstructure of artificial fog. 1

SOURCE: IVUZ. Fizika, no. 2, 1964, 90-97

TOPIC TAGS: fog, spectral transparency, infrared spectrometer, photometer, droplet concentration, water content, spectrometer IKS 6, photometer FEU 22

ABSTRACT: The details of an experimental analysis in the study of artificial fog microstructure and spectral transparency are presented. All measurements were made in artificial fog created by evaporation in a 15^3 m chamber. An IKS-6 infrared spectrometer was used to determine transparency in the region 2-15 μ, and a photometer FEU-22 was used to determine the transparency in regions 0.42, 0.68, 0.94 and 1.03 μ with 20-30 m μ width. Probes were placed in the chamber to determine droplet concentration, droplet distribution functions and parameters, and water content of the mist. The instruments included flow traps of shaft and reel type, curvilinear flow traps for fine-droplet capture, and optical instruments with remote control. An attempt was made to measure spectral transparency simultaneously with

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ZUYEV, V.Ye.; KABANOV, M.V.; KOSHELEV, B.P.; TVOROGOV, S.D.; KHMELEVTSOV, S.S.

Spectral transparency and microstructure of artificial fogs. Part 2. Izv. vys. ucheb. zav.; fiz. no. 3:92-96 '64. (MIRA 17:9)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.

L 11350-65 EWT(l)/FCC/EWG(v)/EEC(t) Pe-5/Pi-4 ESD(t)/ESD(gs) GW
ACCESSION NR: AP4047350 S/0139/64/000/005/0080/0085

AUTHOR: Zuyev, V. Ye.; Kabanov, M. V.; Savel'yev, B. A.

TITLE: Attenuation of light signals in a scattering me... Applicability of an exponential law of attenuat...

SOURCE: IVUZ. Fizika, no. 5, 1964, 80-85

TOPIC TAGS: light scattering, fog effect, fog ... atmospheric light beam interaction

ABSTRACT: A study was made to determine the limits of applicability of an exponential law for the attenuation of a light signal in a scattering medium. In connection with this, Bouguer's law was verified experimentally in order to describe the attenuation of direct monochromatic radiation in artificial fog. In order to obtain results which have a direct bearing on the method used in these measurements, the effect of ... scattering of radiation was taken ... The experimental apparatus used for this purpose was described ... earlier article [Zuyev, V. Ye., M. V. Kabanov, IVUZ. Fizika, no. 4, 1964]. The experimental results obtained for three types of finely

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dispersed fog indicate with accuracy the applicability of an exponential law of attenuation for optical thicknesses of 5.5 m and for distances between source and receiver equal to or less than 3 m. Different results were obtained for fog with mean square diameter of droplets 7.5 ± 1 μ. These indicate essential dependence of the coefficient of scattering on distance. The fact that the derived law is independent of the concentration of scattering particles indicates the unimportant role played by multiple scattering within the investigated range of τ-effects. The satisfactory quantitative agreement exists between the measured values of side-scattered radiat computed values for simple scattering [Zuyev, V. Ye., M. V. Kabanov, A. G. Borovoy, IVUZ, Fizika, no. 4, 1964; Zuyev, V. Ye, M. V. Kabanov, ibid] further confirm the above. The observed dependence of the attenuation factor on the distance was found to be similar to that derived by D. Sinclair [JOSA, 37, 475, 1947] and Ye. A. Polyakova [GGO Trudy, 68, 1957] and, consequently, can be interpreted as a portion of the forward radiation scattered on fog particles. The qualitative proof of the above statements requires special experimental and theoretical studies which are presently under way. The results of these will be published in forthcoming issues. Orig. art. has: 3 formulas and 3 figures.

L 11350-65
ACCESSION NR: AP4047350

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V. V. Kuyby*shava (Siberian Physicotechnical Institute, Tomsk State University)

SUBMITTED: 20Jun63 ATD PRESS: 3118 ENCL: 00

SUB CODE: OP, EC NO REF SOV: 006 OTHER: 002

Card 3/3

L 52756-65 EWT(1)/EWG(v)/FCC/EEC(t) Pe-5/Pi-4 GW/GS

ACCESSION NR: AT5011159 UR/0000/64/000/000/0085/0090

AUTHOR: Kabanov, M. V.

TITLE: Influence of experimental conditions on the measured value of the scattering coefficient

SOURCE: Mezhvedomstvennoye soveshchaniye po aktinometrii i optike atmosfery. Moscow, 1962. Aktinometriya i optika atmosfery (Actinometry and atmospheric optics); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 85-90

TOPIC TAGS: atmospheric optics, atmospheric scattering, scattering coefficient, fog chamber

ABSTRACT: The author has attempted to determine the influence of experimental conditions on the value of the measured coefficient of scattering; the specific case considered is when an extensive layer of scattering particles is illuminated by a narrow parallel light beam. The investigations were made in an artificial fog chamber, using a photometer and a method described in this same collection of articles (p. 90). Measurements were made, changing the [illegible] parameter of the measuring apparatus in the [illegible]

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L 52756-65
ACCESSION NR: AT5011159

[illegible] sions drawn on the basis of the experimental and theoretical [illegible]

factor in the case of a sufficiently narrow incident parallel beam of light is a function of the angular aperture of the detector, size of the objective, distance to the [illegible] parameter. Experiments made for different values of the parameters [illegible] of light [illegible]

[illegible] tering coefficient by means of a correction factor is desirable in a limited range of optical densities τ. The observed deviations for large τ can be attributed qualitatively to the influence of radiation scattered from the side and are essentially dependent on the size of the incident beam. The experimental data can serve as a basis for developing a general theory of the attenuation of a light signal in a scattering medium for different experimental conditions. Orig. art. has: 6 formulas, 2 figures and 1 table.

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L 52756-65
ACCESSION NR: AT5011159

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom [illegible] Institute

SUBMITTED: 25Nov64 ENCL: 00 SUB CODE: OP, ES

NO REF SOV: 003 OTHER: 003

Card 3/3

L 52762-65 EWT(1)/EWG(v)/FCC/EEC(t) Pe-5/Pi-4 GS/GW
ACCESSION NR: AT5011160 UR/0000/64/000/000/0000/0000

AUTHOR: Zuyev, V. Ye.; Kabanov, M. V.

TITLE: Attenuation of a light signal with allowance for diffuse scattering in the medium

SOURCE: Mezhvedomstvennoye soveshchaniye po aktinometrii i optike atmosfery. 5th, Moscow, 1962. Aktinometriya i optika atmosfery (Actinometry and atmospheric optics); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 90-96

TOPIC TAGS: light scattering, diffuse scattering, Bouguer's law, light attenuation, single scattering

ABSTRACT: The article presents results of theoretical and experimental investigations of the influence of diffusely scattered radiation on the attenuation of radiation [illegible] and the results of a [illegible] attenuation of the direct light. The details of the calculations will be published elsewhere. The results indicate that the contribution to the signals from the diffusely scattered light may exceed by a factor of several times the [illegible]

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L 5276[illegible]-65
ACCESSION NR: AT5011160

of the directly attenuated light, and that this can introduce an error of several hundred percent in the experimental research. The extraneously scattered light is characterized by a quantity D defined by the relation $n = n_0 \exp(-\tau)(1 + \tau D)$, where n is the attenuated signal, n_0 the signal in the absence of attenuation, and τ the optical thickness. Equipment and test procedure aimed at determining [illegible] experimentally are described. Most of the experiments were carried [illegible]

[illegible] lead to the conclusion that the role of diffusely scattered light can be [illegible]

[illegible] = 2.7 in natural fog. It is also possible to determine the mean square diameters of the scattering particles from the experimentally determined value of D. An experimental verification of Bouguer's law in an artificial fog chamber [illegible] this law to be applicable up to optical densities $\tau \approx 5.5$ in the case [illegible] diameter 1.5 [illegible], with an appreciable dependence of the measur[illegible]

[illegible]

[02]

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L 52762-65

ACCESSION NR: AT5011160

ASSOCIATION: [illegible] Elektrotekhnicheskiy Institut [illegible]

SUBMITTED: [illegible] ENCL: 00

HQ REF GOV: 007 OTHER: 005 ATD PRESS: 4013

Card 3/3

L 10764-65 EWT(1)/FCC Pi-4 GS/GW UR/0000/64/000/000/0096/0101

ACCESSION NR: AP5011113

AUTHOR: Zuyev, V. Ye.; Kabanov, M. V.; Koshelev, B. P.; Tvorogov, S. D.; Khmelevtsov, S. S.

TITLE: Spectral transparency and microstructure of artificial fogs

SOURCE: Mezhvedomstvennoye soveshchaniye po aktinometrii i optike atmosfery 5th, Moscow, 1963. Aktinometriya i optika atmosfery (Actinometry and atmospheric optics); trudy soveshchaniya, Moscow, Izd-vo Nauka, 1964, 96-101

TOPIC TAGS: artificial fog, spectral transparency, artificial fog microstructure, aerosol, fog

ABSTRACT: The article discusses the results of a comprehensive theoretical and experimental investigation of the optical and microphysical properties of [illegible] of attenuation for a polydispersed medium, with allowance made for the complexity of the index of refraction of the drop material. Simultaneously performed measurements of the spectral transparency of the fogs in the visible and [illegible] as well as microstructure [illegible]

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possible to quantitatively compare the theoretical and experimental data. The calculations show that the spectral variation of the relative attenuation coefficient depends greatly on the particle size distribution. In all cases the transparency of a fog is lower in the 2—5μ region than in the visible region, whereas in the 10—12μ region all fogs are more transparent than in visible light. In the 8—10μ region, the transparency can be either larger, the attenuation coefficients being determined essentially by the magnitude and position of a certain function, which is calculated. All microphysical and spectral optical measurements were made in an artificial fog chamber 15 m^3 in volume, using a specially constructed photometer and an IKS-6 infrared spectrometer for the measurement of the transparency in the physical and infrared regions. All optical and microphysical measurements were made for the spectral region near 0.42 and simultaneously in the infrared region at 2.15, 3.7, 6.5, 8.0, 10.0, and 11.8 . The optical density of the fogs ranged from 0.1 to 1.5, and the attenuation for visible light ranged from 2×10^{-4} to 52×10^{-4} cm^{-1}. The agreement between the experimental and theoretical results is considered to be satisfactory when account is taken of unavoidable experimental errors. Orig. art. has: 5 figures and 10 formulas.

[02]

L 47763-65

ACCESSION NR: AT5011161

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete (Siberian Physicotechnical Institute at the Tomsk State University)

SUBMITTED: 25Nov64 ENCL: 00 SUB CODE: ES, OP

NO REF SOV: 007. OTHER: 004 ATD PRESS: 4005

Card 3/3

Pe-5/Pi-4 GM/GS

optics)] trudy sovashchaniya, Moscow, Izd-vo Nauka, 1964, 234-237

TOPIC TAGS: atmospheric transparency, infrared light, meteorological instrument, transparency water

ABSTRACT: Many problems in the field of propagation of electromagentic waves in [illegible] require development of modern apparatus making it possible to determine various statistical characteristics of signals and [illegible] high accuracy. With respect to the investigation of long-wave radiation, the detection of a useful signal in the presence of interference is possible using an infrared radiation sensor, operating with a narrow-band amplifier, tuned to the modulation frequency of the radiation source. The out[illegible] of the narrow-band am-

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L 52765-65
ACCESSION NR: AT5031177

plifier can be connected to an [illegible] apparatus developed for investigation of distant tropospheric and ionospheric propagation of very-short waves in the range 1-20 kc/s. After modification [illegible]

frared radiation in the atmosphere, especially for [illegible]

problems. The instrument can be used in all cases when [illegible] make a statistical analysis of signals with slowly changing amplitude. Orig. art. has: 4 figures.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete (Siberian Physics and Engineering Institute, Tomsk State University)

SUBMITTED: 25Nov64 ENCL: 01 SUB CODE: OP, ES
NO REF SOV: 000 OTHER: 000

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ZUYEV, V.Ye.; KABANOV, M.V.

Some characteristics of the attenuation of light in the atmosphere. Izv. vys. ucheb. zav.; fiz. 8 no.6:175-177 '65. (MIRA 19:1)

1. Sibirskiy fiziko-tekhnicheskiy institut imeni V.D. Kuznetsova. Submitted July 15, 1964.

L 19908-66 EWT(1)/FCC GW

ACC NR: AP6002095 SOURCE CODE: UR/0139/65/000/006/0175/0177

AUTHORS: Zuyev, V. Ye.; Kabanov, M. V. 33

ORG: Siberian Physicotechnical Institute im. V. D. Kuznetsov (Sibirskiy fiziko-tekhnicheskiy institut) 8

TITLE: Concerning some peculiarities of the attenuation of light in the atmosphere 12

SOURCE: IVUZ. Fizika, No. 6, 1965, 175-177

TOPIC TAGS: atmospheric visibility, light scattering, atmospheric stratification, light absorption

ABSTRACT: The authors report some results of an experimental investigation of the attenuation of light in three regions of the spectrum (0.43, 0.68, and 1.03 μ) and three horizontal layer thicknesses of the atmosphere at the surface of the earth (1.21, 3.65, and 9.86 km) at average degrees of turbidity. The main purpose of these measurements was to obtain experimental data on the laterally scattered radiation in the real atmosphere at thicknesses of 3.65 km at small angular apertures of the receiver, and comparing these data with theoretical results of earlier work by the authors (Izv. Vuzov SSSR, Fizika No. 6, 1963 and

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earlier papers). A special photometer with variable angular aperture (0.01 -- 0.0025 rad) was used. The optical system of the photometer is similar to that used in an artificial-fog camera and described by the authors earlier (Izv. Vuzov SSSR Fizika, No. 1, 1964). The sections of the spectrum were separated with interference and glass optical filters. The half-width of the separated transmission bands was 20 -- 30 nm for all the band centers indicated above. The light source was a 3-kw floodlight placed 3.65 km from the receiver. The ratio of the scattered to the direct radiation was calculated by extrapolation. The attenuation coefficients per kilometer are defined as the ratio of the signals for the distances 1.21 and 3.65 km (K_{12}) and the ratio of the signals for 1.21 and 9.86 km (K_{13}). The values of the coefficients, as well as the relative value of the diffuse radiation at unity optical thickness (D) are tabulated for different sections of the spectrum. The results show that the role of the laterally scattered light, for typical average values of turbidity (visibility 10 -- 15 km), is variable and depends on the content of large particles in the atmosphere during the measurements. Anomalous variation of D (increase) with increasing wavelength is likewise related with the particle size, and further tests on the nature of this relation are being planned. Another observation that calls for further research is the fact that the attenuation of the light

L 18908-66
ACC NR: AP6002095

signal seems to be slower for large thicknesses of the atmosphere. The presence of a transparency maximum in the region 0.4 -- 1 micron can also be attributed to this hypothesis. Orig. art. has: 1 table. [02]

SUB CODE: 04/ SUBM DATE: 15Jul64/ ORIG REF: 004/ OTH REF: 002
ATD PRESS: 4187

Card 3/3 mc

KABANOV, N.

Creative initiative of the masses and the seven-year plan.
Sots.trud no.12:11-16 D '58. (MIRA 13:4)
(Bearing industry)

KARANOV, N.

Labor organization on automatic assembly lines. Sots.trud no.2: 104-109 F '56. (MIRA 9:7)
(Bearings (Machinery)) (Automation)

KABANOV, N.

Certain questions of labor organization under conditions of modern technology. Sots.trud 5 no.3:53-59 Mr '60.(MIRA 13:6)
(Bearing industry)

USANOV, P.; BLOKH, V.; KABANOV, N.; MAYOROV, I.; AMCHISLAVSKIY, F.

Reduction of staff personnel is an essential matter. Sots.trud no.3:105-126 Mr '58. (MIRA 13:3)

1. Nachal'nik otdela organizatsii proizvodstva tekhnicheskogo upravleniya Leningradskogo soveta narodnogo khozyaystva (for Usanov). 2. Direktor zavoda svetotekhnicheskikh izdeliy (for Blokh). 3. Nachal'nik otdela truda i zarplaty Pervogo gosudarstvennogo podshipnikovogo zavoda (for Kabanov). 4. Direktor Leningradskogo zavoda delitel'nykh golovok (for Mayorov). 5. Nachal'nik proizvodstva Leningradskogo zavoda delitel'nykh golovok (for Amchislavskiy).

(Leningrad--Industrial organization)

30831. KABANOV, N. D. AND TROSHIN, N. G.

Primeneniye indudtsionnogo nagreva dlya goryachey nasadki. Prom. energetika, 1949, No. 10, s. 9-11.

KABANOV, N. I.

PA 11T36

USSR/Solar Phenomena Mar 1946
Radio waves - Propagation

"Some Observations on the Propegation of Ultra-short Waves During the Solar Eclipse of 9 Jul 1945," N. I. Kabanov, 4 pp

"Izv Ak Nauk Ser Fiz" Vol X, No 3

Five charts showing variation with time of day.

11T36

21578

9.9000
9.9300

S/109/60/005/010/001/031
E033/E415

AUTHOR: Kabanov, N.I.

TITLE: Short-Wave Long-Distance Scatter Reflection From the Earth

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.10, pp.1576-1591

TEXT: This article is a review of investigations, in the USSR and abroad, into the scatter phenomena associated with long-range high-frequency communication and radar systems. In 1926-30, it was observed that short-wave radio signals were received not only in the zone illuminated by the "direct" ray, i.e. the ray reflected from the ionosphere, but also in the "dead" zone. From further investigations into features peculiar to short-wave systems, it was soon concluded that these features could be explained by scatter reflection. In 1946 in the USSR, from analysis of radar observations, communication-system operational data and ionospheric investigations, it was asserted that long-range, ground scatter was of primary importance and ionospheric-scatter was only secondary. This was confirmed experimentally in 1947. A special commission was established in 1948 under the chairmanship of S.E.Khaykin

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Short-Wave Long-Distance ...

(N.D.Bulatov, I.S.Dzhigit, A.N.Kazantsev, M.I.Ponomarev and others) which conducted a series of experiments and theoretical investigations into radio-wave propagation in the ionosphere (maximum frequencies, skip-distances etc). The commission concluded that the return signals were, in the main, produced by ground scatter and further lines of investigation were suggested. In this further investigation (1947-58), the following results were obtained.

1. It was experimentally confirmed that return scatter reflection from the ground at ranges reaching 2000 to 3000 km could be detected at the transmitter.
2. Regular reception of long-range scatter over distances of 3000 to 6000 km was obtained. There was general correspondence between diurnal and seasonal change in the ranges of the near and far boundaries of reflection groups and changes in the ionosphere. The change in the range of the near-boundary corresponded to change in the maximum frequencies, and the change in the far-boundary to changes in absorption.
3. It was possible to discriminate reflections from ground and sea surfaces.

4. Use of a pulse responder in the illuminated zone showed the coincidence of the instants at which the responder operated (and ceased to operate) with the beginning (and ending) of the illumination; these instants were determinable by reverse scatter at the transmitter point.
5. Experiments showed that reverse scatter came most strongly from regions with a "broken" relief, e.g. mountains.
6. The ranges from which reverse scatter is observed usually reached 2500 to 3000 km with transmitter powers of the order of several kilowatts but often, especially at night, the range was 6000 km or more. With greater transmitter powers and high-gain aerials, ranges of the order of 10000 to 12000 km and more were observed, as shown by K.M.Kosikov and B.I.Onetrov (Ref. 6-8).
7. Analysis of the reverse-scatter signals, including meteorite tracks, gave data on the antenna directivity in both the horizontal and vertical planes.
8. Analysis of systematic observations showed the relations between range and frequency for diurnal and seasonal variation.
9. Examination of the range to the boundary of the reflection groups showed that changes in range, diurnal, seasonal and

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Geometric theory of Carathéodory's transformations in the problem of Lagrange. Trudy Sem.po vekt.i tenz.anal. no.11:219-240 '61. (MIRA 15:3)
(Calculus of variations) (Geometry, Projective)

KABANOV, N.I.

Singular Finsler space determined with an accuracy to Caratheodory's transformations. Sib. mat. zhur. 2 no.5:655-671 S-O '61. (MIRA 15:3)

(Aggregates) (Spaces, Generalized) (Calculus of variations)

S/020/61/140/001/005/024
C111/C222

AUTHOR: Kabanov, N.I.

TITLE: On the geometrical theory of the simplest singular variation problem for an (n-1)-times repeated integral

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 1, 1961, 37 - 40

TEXT: The author considers the variation problem for the (n-1)-fold integral

$$I = \int \ldots \int_{Q(t^a)} \phi\left(\xi^\lambda, \xi^\lambda_a\right) dt^1 \ldots dt^{n-1} \left(\xi^\lambda_a = \frac{\partial \xi^\lambda}{\partial t^a}\right) \quad . \quad (1)$$

The postulate of the invariance of (1) with respect to the parameter transformation

$$*t^a = c^a(t^b) \quad \left(\mathrm{Det}\left|c^a_b\right| > 0 \ , \ c^a_b = \frac{\partial c^a}{\partial t^b}\right) \qquad (2)$$

leads to the assertion that ϕ must have the form

Card 1/5

Interpreting the ξ^α as point coordinates of a geometric space X_n then every hypersurface

$$\xi^\alpha = \xi^\alpha(t^a) \tag{6}$$

is called measurable if on it (5) has a sense. The hypersurface

$$\mathcal{F}(\xi^\lambda, \eta_\alpha) = 1 \quad , \tag{7}$$

where ξ^λ is fixed is called an indicatrix. The variation problem (5) is called singular of the class of singularities r if the rank of

$$\| \mathcal{F}^{\alpha\beta} \| \quad , \quad \left(\mathcal{F}^{\alpha\beta} = \frac{\partial^2 \mathcal{F}}{\partial \eta_\alpha \partial \eta_\beta} \right) \tag{8}$$

is equal to n - 1 - r . For r = 0 the problem (5) is called regular (Ref. 1).

In the present paper the author considers the case r = 1 , where (7) are hypersurfaces of the first class of singularities in the manifold $\mathcal{E}_n(X_n)$

Card 3/5

$$\phi(\xi^{\alpha}, \xi_a^{\lambda}) = \mathcal{L}_{\gamma}(\xi^{\lambda}, \varpi_{\alpha\beta_1\ldots\beta_{n-1}}\, \xi_1^{\beta_1} \ldots \xi_{n-1}^{\beta_{n-1}}), \quad (4)$$

where $\mathcal{L}_{\gamma}$ is a function being positive and positively homogeneous (of first degree) with respect to the second group of arguments, and $\varpi_{\alpha\beta_1\ldots\beta_{n-1}}$ is the fundamental n-vector unit density of the weight -1. The integral (1) for (4) has the form

$$\sigma = \int \ldots \int_{Q(t^a)} \mathcal{L}_{\gamma}(\xi^{\lambda}, \eta_{\alpha})\, dt^1 \ldots dt^{n-1} \quad (\eta_{\alpha} = \varpi_{\beta_1\ldots\beta_{n-1}} \xi_1^{\beta_1} \ldots \xi_{n-1}^{\beta_{n-1}}) \quad (5)$$

The paper is devoted to a geometrical theory of the variation problem (5). The theory is based on the results of V.V. Vagner (Ref. 1, Tr. seminara po vektorn. i tenzorn. analizu, 8, 144 (1950) ; Ref. 2, Matem.sborn., 21 (63), no. 3, 321 (1947) ; Ref. 3, Tr. seminara po vektorn, i tenzorn. analizu, 8, 11 (1950)). Partially the author uses the notations and notions of (Ref. 1,2,3) without any explanation.

(Ref. 3) .
Thus the considered variation problem leads to the theory of the singular hypersurface of the first class of singularities in the $\mathfrak{E}_n$. Since $\mathfrak{E}_n$ is a central-affine space in the sense of (Ref. 1) the central-affine theory of these surfaces (Ref. 2) can be used. To the given problem (5) there corresponds a field of singular hypersurfaces in $\mathfrak{E}_n(X_n)$ the equations of which in hypercoordinates read :

$$\eta_\alpha = \ell_\alpha(\xi^\lambda, \eta^a) \quad . \qquad (28)$$

Understanding every hypersurface of the field (28) as an X_{n-2} then it leads to the manifold $X_{n+(n-2)}$. Now the author gives conditions from which the invariant linear connection in $X_{n+(n-2)}$ can uniquely be determined if the indicatrices of (5) are no cylindrical or conic surfaces, and some further assumptions are satisfied. The obtained linear connection in $X_{n+(n-2)}$ is used for giving conditions under which the problem (5)
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